



TRAINING STANDARDS COUNCIL

INSPECTION REPORT OCTOBER 1998

REINSPECTION REPORT DECEMBER 1999

Rolls-Royce plc
Derby

SUMMARY

At the time of the first inspection, Rolls-Royce plc offered good engineering training. Trainees had the opportunity to gain additional skills and qualifications and they worked to high standards. Equal opportunities and trainee support were outstandingly good. The management of training was satisfactory, but the quality assurance systems in the training department were poor. The quality of trainees' work was high, but there were no systematic checks made to ensure that this is maintained and further improved. Following reinspection, the quality of training was found to be satisfactory, with the introduction of new systems to regularly evaluate and improve areas such as trainees' recruitment and induction.

As a result of the reinspection of Roll-Royce plc, the original published report text for quality assurance has been replaced by new text which makes reference to the original inspection findings. This summary page, the overall report introduction and the inspection findings introduction have also been amended to reflect the findings of the reinspection. All other sections of the original report, which have not been subject to full reinspection, have been left in their original form.

GRADES

OCCUPATIONAL AREAS	GRADE
Engineering	2

GENERIC AREAS	GRADE
Equal opportunities	1
Trainee support	1
Management of training	3
Quality assurance	4

REINSPECTION	GRADE
Quality assurance	3

KEY STRENGTHS

- ◆ comprehensive and effective trainees' selection and induction
- ◆ effective trainee support and personal development
- ◆ excellent promotion of equal opportunities
- ◆ trainees work to high standards
- ◆ good progression opportunities for trainees
- ◆ targets for recruiting under-represented groups are exceeded

KEY WEAKNESSES

- ◆ inadequate management information systems
- ◆ poor communication among departments
- ◆ lack of co-ordination between on- and off-the-job training
- ◆ trainees' reviews not always completed in contractual timescales

INTRODUCTION

1. Rolls-Royce plc is one of the world's foremost engineering companies, supplying aero engines and power systems to customers in international markets. The company has around 43,000 employees worldwide, and last year's annual sales were in excess of £4 billion.

2. Rolls-Royce in Derby is spread over eight main sites and employs over 11,000 people. Most of the sites are located in a two-mile radius of one another, in a largely residential area about two miles out of the city. The training centre is located about six miles away from these sites, and at the time of the first inspection, there were 170 engineering modern apprentices in training across the sites. All modern apprentices work in aeronautical engineering fields, covering disciplines such as mechanical, manufacturing, electrical, laboratory and design. They are all employed by Rolls-Royce. At the time of reinspection, there were 230 modern apprentices working across the sites.

3. Trainees' recruitment and training are the responsibility of the early career development department (ECDD), which provides this service on behalf of different parts of the Rolls-Royce business. The ECDD is part of the training and development function at Rolls-Royce and is recognised as an Investor in People.

4. Rolls-Royce's modern apprentices are funded by the Southern Derbyshire Chamber of Commerce, Training and Enterprise (CCTE). Trainees work towards national vocational qualifications (NVQs) at level 2 for the first year and then at level 3 or 4 for the rest of their training period. Trainees also attend further education colleges or university for additional off-the-job training and education. This provision is subcontracted by Rolls-Royce, and trainees can even progress to the completion of engineering degrees.

5. Southern Derbyshire is host to a diverse range of companies and employers from all sectors of industry and commerce, from both private and public sectors. There is particularly strong representation in manufacturing, and the presence of Rolls-Royce means that the area has a large proportion of workers in the aerospace industry. There is also a large amount of transport equipment work in the area. Manufacturing has provided job growth in recent years and is forecast to continue doing so up to 2000, particularly in clothing, printing and publishing, rubber, plastics and other general manufacturing.

6. Unemployment in southern Derbyshire has been declining in recent years, standing, in July 1997, at 7.4 per cent. At the time of the first inspection, this figure was still high, compared with the national average figure of 5.1 per cent. By the time of reinspection it was 3.3 per cent compared with the national average for December 1999 of 3.8 per cent. Unemployment among young people remains a problem in the area, although it has fallen in recent years. The decline in

unemployment for young people has been slower than that for other age categories, but it still accounts for about 30 per cent of the overall unemployment total.

7. For young people, the main change since 1989 has been the shift in favour of staying on in education at the expense of other post-16 routes, notably employment and training, although more youngsters are starting to be attracted back into these areas again. In 1999, the proportion of school leavers achieving five or more general certificates of education (GCSEs) at grade C and above was 49.1 per cent compared with the national average of 47.9 per cent. Minority ethnic groups account for a relatively small proportion of southern Derbyshire residents, although, in Derby, they make up nearly one in ten of the population.

INSPECTION FINDINGS

8. ECDD produced its first self-assessment report in July 1998. The report was compiled by a working party, comprising the modern apprentices' training officers, the training manager and a graduate trainee seconded to the ECDD. The report provided inspectors with clear information about the organisation, and many of the identified strengths and weaknesses were confirmed by inspectors, although additional ones were identified. The department had underestimated the strengths in trainee support and equal opportunities, but had also underestimated weaknesses in the management of training.

9. For the first inspection a team of three inspectors spent a total of 12 days at Rolls-Royce in Derby during October 1998. Interviews were conducted with 42 trainees, 19 members of Rolls-Royce's staff and five subcontractors' staff. Inspectors observed training sessions, workplace assessments and trainees' reviews. Trainees' portfolios, assessment records and work products were also examined.

10. Reinspection was carried out by a team of two inspectors over a total of six days in December 1999. They interviewed 12 of the 230 engineering trainees. They examined documents relating to trainees, including portfolios and assessment records, and quality assurance documents. They interviewed 11 members of staff, visited a subcontractor's site and interviewed two subcontracted staff, and observed a review and a training session.

OCCUPATIONAL AREAS

Engineering

Grade 2

11. ECDD currently has 170 modern apprentices, all of whom are employed from the start of their training programme. All trainees complete a foundation award, covering all the basic engineering skills at NVQ level 2 in their first year of training. They complete a level 3 or 4 by the end of their training in their specialist engineering disciplines, such as mechanical, machining, electronics, laboratory technicians or pattern-making. ECDD is an approved centre for the assessment of awards. Inspectors agreed with the self-assessment grade proposed by the company.

STRENGTHS

- ◆ comprehensive and rigorous recruitment
- ◆ good initial assessment
- ◆ comprehensive induction readily recalled by trainees
- ◆ very high-standard NVQ portfolios

- ◆ comprehensive training plans are easy to understand
- ◆ high standard of training
- ◆ trainees' competence level is above that required for the NVQ
- ◆ good progression opportunities for trainees
- ◆ good awareness and understanding, by trainees, of key skills and NVQs
- ◆ comprehensive combined training programmes
- ◆ training co-ordinators experienced in production employed to train modern apprentices and other employees

WEAKNESSES

- ◆ training instructors not informed about trainees' progress off the job
- ◆ slow feedback to trainees about assignments completed at college
- ◆ trainees' progress reviews not always completed in contractual timescales
- ◆ some trainees have experienced limited access to training resources

GOOD PRACTICE

Trainees are encouraged to assist with careers talks for schools and new trainees' induction. This process helps to develop confidence, the resulting evidence from presentations being used for their key skills portfolio work.

12. Potential trainees undergo a rigorous selection process, helping to ensure that trainees with an aptitude for engineering are recruited. This includes interviews, written tests and practical assessments. The initial assessment process takes account of any previous achievements and, if identified, these are assessed and recognised, provided that they meet the company standard. Training plans then reflect any previous attainment.

13. The induction process is well planned and effectively delivered. Trainees readily recall the processes and are able to give clear details of areas covered.

14. NVQ portfolios are of a very high standard, with good cross-referencing systems and well-produced evidence. Training is of a high standard: trainees are very attentive and interested in the subject matter. The level of competence achieved by trainees is above that required for the NVQ, as aerospace production processes require a high degree of skill, with the application of fine engineering tolerances. Many trainees complete a higher national certificate (HNC) in engineering as part of their apprenticeship programme, and there is opportunity, for those trainees with the ability, to complete an engineering degree.

15. ECDD has combined its training requirements with those of the awarding body, to provide trainees with a comprehensive programme which prepares them for working in the aerospace industry. This combined programme has been agreed on with the awarding body and is professionally produced in Rolls-Royce's format. In key areas of the production processes, full-time training co-ordinators, who previously worked in the production environment, are employed to train both modern apprentices and other staff. This commitment to training provides trainees with a high degree of access to competent trainers, together with well-planned assessment opportunities.

16. Training instructors are not made aware of how the trainees are progressing at college, despite the information being made available to the training officers in the ECDD department. Trainees attending one college feel that there are long delays in receiving feedback about their performance in course assignments.

17. The number of apprentices and graduate trainees recruited by Rolls-Royce has increased dramatically in recent years. This has, on odd occasions, led to problems with the effective planning of training resources. Trainees have experienced delays in moving to the next appropriate training area, owing to unexpected changes in timetable schedules. This has resulted in training programmes being delayed.

GENERIC AREAS

Equal opportunities

Grade 1

18. At Rolls-Royce, equal opportunities are encouraged, managed and recognised among staff and trainees. The policy meets with current legislation and is reviewed by an equal opportunities executive, in conjunction with the chief executive and personnel directors. The company has its own equal opportunities committee, comprising staff, trade union and personnel representatives. The company monitors the gender and ethnicity of those recruited to training. Under-represented groups are identified by ECDD, which, in turn, promotes equality of opportunity by attending schools, career conventions, participating in community projects and supporting several national and local initiatives. The self-assessment report underestimated the strength of provision in this area, and inspectors awarded a higher grade than that proposed by the company.

STRENGTHS

GOOD PRACTICE.

Other events organised by the company have included 'sci-tec', a one-week event promoting science and technology in schools, and 'roller-world', an annual recruitment event aimed at attracting young people to training.

- ◆ equality of opportunity is embedded in the organisation's culture
- ◆ selection and recruitment procedures are conducted free from bias
- ◆ trainees' responsibilities to equal opportunities are clarified during induction
- ◆ all managers and supervisors attend equal opportunities awareness sessions
- ◆ there is an established and active equal opportunities committee
- ◆ targets for recruitment of under-represented groups are exceeded
- ◆ the company supports local and national initiatives
- ◆ effective procedures for dealing with complaints

WEAKNESSES

- ◆ no clear procedures to monitor the effectiveness of the policy

19. ECDD's equal opportunities policy is reviewed annually by senior management and is updated to reflect changes in legislation. Access to the training programme is

available to any individual who can meet the minimum entry requirements applicable to the industry.

GOOD PRACTICE

The company demonstrates its commitment to equal opportunities by supporting many local and national initiatives. One such example was a 'take your daughter to work' day, allowing employees to bring their daughters into the workplace and shadow them through a day's work.

20. The company promotes its equal opportunities policy in trainees' induction packs and staff training materials. Managers and line supervisors undertake equal opportunities training and are updated on changes in legislation. The company has an equal opportunities committee, consisting of representatives from a full cross-section of employees who monitor equal opportunities issues in ECDD.

21. Statistics are collated to monitor recruitment of under-represented groups, and ECDD takes positive steps to address any imbalance. Recruitment and promotional literature contains an equal opportunities statement. A thorough evaluation of requirements for those with disabilities has been conducted, and action has been taken to ensure that facilities are available. There is wheelchair access to all sites. There are well-documented procedures for dealing with complaints. There are no specific procedures to ensure that policies are fully promoted and implemented throughout the organisation.

Trainee support

Grade 1

22. ECDD is committed to providing its trainees with the support required to achieve their objectives. Each trainee receives comprehensive initial assessment and induction at the start of his/her training programme. Guidance and support are provided at all stages of training, and trainees have access to personal counsellors. Each trainee receives regular feedback on progress and performance. Inspectors identified several additional key strengths to those listed in the self-assessment report and awarded a higher grade than that proposed in that report.

STRENGTHS

- ◆ occupational skills and trainees' needs systematically assessed on entry
- ◆ trainees given relevant and objective advice
- ◆ comprehensive and effective induction
- ◆ trainees are very satisfied with their progress review procedures
- ◆ effective personal counselling available to all trainees
- ◆ effective additional support given to trainees with additional learning needs
- ◆ potential trainees are given the opportunity of work experience
- ◆ trainees given extensive opportunities for personal development

WEAKNESSES

- ◆ initial assessment not used to develop individual training plans
- ◆ key skills not systematically assessed on entry
- ◆ some disruption to trainees' programmes

23. Potential trainees receive excellent opportunities for work experience, during which they receive helpful advice about careers in engineering. Initial assessment, at the recruitment stage, is thorough and includes aptitude and reasoning tests, as well as two-stage interviews. However, information gained during this process is not used to develop individual training plans.

GOOD PRACTICE

Some trainees, who did not achieve the required grades in GCSE mathematics, were allowed to start their modern apprenticeship. They were given coaching and assistance, which enabled them to resit their GCSE examination successfully and continue with their training.

24. Trainees receive a comprehensive induction which includes all aspects of rights, responsibilities and training programmes. Trainees express their appreciation of introductory sessions, such as 'icebreaker', and demonstrate a high level of retained knowledge. Progress review sessions are highly regarded by trainees, owing to the helpful advice received and the two-way feedback provided. Several of ECDD's staff are trained in personal counselling, and trainees have full access to a team of professional counsellors, if required. Trainees with learning difficulties or disabilities are given additional support; this includes extending training programmes and coaching by specialist tutors. Opportunities for personal development are extensive and include activities with the apprentice association, conducting schools' open-evening presentations, entry into national and international apprentice competitions, international exchange visits, outdoor projects and community activities.

25. Some trainees experience disruptions to their training programmes; this is due to changes in business requirements. Some are required to repeat their first-year college course in a new discipline; others are transferred from their preferred technical apprenticeships to craft skills.

Management of training

Grade 3

26. The management and staff structure has recently been revised, in response to a significant increase in the number of trainees. Lines of responsibility and communications are clear, with separate responsibility for operations and recruitment. Inspectors' assessment of strengths and weaknesses was different from that contained in the self-assessment report; they awarded a lower grade than that proposed by the company in its self-assessment report.

STRENGTHS

- ◆ clear definition of corporate objectives and targets in the business plan
- ◆ managers set and monitor measurable targets for all staff
- ◆ effective training and development of staff

WEAKNESSES

- ◆ inadequate management information systems
- ◆ feedback from trainees not used to evaluate effectiveness of training

- ◆ poorly attended team meetings where progress of action items are not minuted
- ◆ some ineffective communication among departments

27. The company's business plan clearly states the corporate objectives and means of achievement, and copies are issued to the appropriate staff. All staff agree, with their immediate manager, on personal objectives. Performance against these objectives is reviewed on an annual basis. Following the achievement of the Investors in People Standard in 1996, the introduction of an effective training and development programme has resulted.

28. There are no systems to provide managers with prompt and accurate information about operational statistics and training outcomes. Trainees' feedback is not systematically obtained or used to evaluate the effectiveness of training. ECDD's team meetings provide a focal point for progress-monitoring and communication. However, attendance at team meetings is given a low priority by staff, and the progression of action items is not effectively monitored.

29. On some occasions, lack of communications between ECDD and other departments has caused delays in providing training resources.

Quality assurance

Grade 3

30. At the first inspection, ECDD had a quality assurance policy which identified that the company was continuing to work to the ISO 9000 quality standard. It also met the requirements of the awarding body. Not all operations met the requirements of the CCTE with which it contracts. The good-quality of the company's manufactured products ensured that work placements are of a very high standard. Inspectors agreed with the grade proposed by the company in its self-assessment report. When the reinspection was conducted, process flow charts had been devised for most of the training systems to provide a clear, easy-to-follow graphical representation of the training procedures. The flow charts show the order and different possible results of events that occur throughout an operation.

At the first inspection, the main weaknesses identified were as follows.

- ◆ no defined quality system covering apprentices' training
- ◆ formal quality monitoring is not part of routine procedures
- ◆ evaluation of training is conducted in isolation
- ◆ improvement plans are not afforded the attention required
- ◆ no formalised system for tracking of NVQ achievement

31. Considerable improvements have been made in accordance with the action plan. Rolls-Royce's second self-assessment report re-graded the provision at grade 3 and inspectors agreed with this grade.

STRENGTHS

- ◆ good work placements
- ◆ evaluations have led to improvements

WEAKNESSES

- ◆ managers' views about the effectiveness of training are not systematically sought
- ◆ ineffective quality improvement meetings

32. Trainees are assessed while producing good-quality engineering components. Quality assurance controls in the manufacturing processes create an environment where quality is of the essence.

33. At the time of reinspection, there was good evidence of how evaluations had been conducted, and improvements brought about, as a direct result. An analysis had been conducted of the 1998 recruitment and training induction process based on trainees' feedback. This analysis resulted in recommendations to improve the 1999 recruitment and induction by reducing the time taken to inform successful applicants, and to improve the content of the induction programme. Evaluation of the 1999 induction has identified the potential to reduce the induction programme from five to three days.

34. Rolls-Royce is committed to self-assessment and has made many changes to its provision since its first inspection. Many weaknesses previously identified have been remedied. A wide range of process flowcharts relative to training have been developed, which outline activity throughout a particular operation. They also detail alternative actions to be taken should the process deviate from the normal route.

35. Feedback forms have now been implemented which enable trainees' perceptions of the training programme to be gathered. These questionnaires are issued at the end of each block of training when at the training centre and upon completion of an attachment when on-site. They are also distributed to all trainees at the end of each year's training. The feedback is then evaluated and a summary report, including recommendations, is compiled. Owing to the newness of this initiative, the findings contained within the summary report have yet to be disseminated to staff. However, this process has yet to be extended to on-site managers to capture their views on training.

36. Areas for improvement within the early career development department have been identified and are collated on a development plan. Items within this plan are

discussed at quarterly development meetings attended by personnel from various sections within the department. Topics of discussion are minuted and areas where action is required are noted. However, neither the development plan nor the minutes taken include any measurable target date by which these actions should be completed. Subsequently, areas for improvement, which should have been actioned but which have not been progressed, are allowed to carry over from one meeting to another.

37. The internal verification within Rolls-Royce is currently underdeveloped in terms of the sampling of assessors' work and providing feedback to assessors about the verification process. The company has recently brought in an external training company to conduct independent internal verification for Roll-Royce, as the amount of verification work was proving difficult for them to cope with. This company has provided specific documents for recording the verification processes. Even though the system is an improvement on the previous one, it still does not provide sufficiently consistent and reliable verification of apprentices' assessments and portfolio evidence.